89. *Injection of Saline Fluids into the Veins.* By WILLIAM ROBERTSON, M. D.—The injection of a saline fluid into the veins has, by some practitioners, been so strongly recommended, and, on theoretical grounds, seems so rational a practice, that I have not scrupled to resort to it in eight desperate cases. It has never seemed to me a sufficient objection to this practice, that a very large proportion of patients subjected to it die; and had I succeeded in saving a single individual of the eight, by injecting the veins, I should have thought myself fully justified in repeating the experiment. For of these eight cases, not one, according to all human probability, had the slightest chance of a prolonged existence, unless it were by the application of some remedy equally prompt and energetic in its action. Before the hospital in Surgeon Square was opened, the saline injection of the veins was thrice attempted in the Royal Infirmary; in one instance, I believe, with temporary benefit; but all three patients died within a few hours after the performance of the operation. One of these patients, an old woman in the last stage of collapse, fell under my charge, and had five pounds of the ordinary saline solution, recommended by the late Dr. Mackintosh, injected cautiously, at a temperature of 98°, into the median basilic vein. The process lasted about forty minutes; the patient did not rally in the slightest degree, and died in my hands. It was not unreasonable to infer, that the sudden death in this case was the immediate consequence of the operation; yet dissection satisfactorily showed that *no air* had entered the heart or veins. In the eight cases treated in Surgeon Square, the solution used consisted of Muriat. sodæ, ℥ss., Bicarb. sodæ, ℈iv., and Phosph. sodæ, ʒss, dissolved in ten pounds of water, and then filtered. Care was taken to keep the solution at a temperature of 110° to 115°, and all reasonable precautions were adopted in the performance of the operation. The instrument used was an ordinary Read's syringe, and it was carefully cleaned before and after each injection. If this precaution is not observed, a quantity of *copper* must be injected along with the first portions of the fluid. A little difficulty was sometimes experienced in avoiding a certain degree of injection of the cellular tissue of the arm. The best mode of preventing this accident is to puncture the vein as in ordinary venesection, without any preliminary dissection, to push the silver tube into the vein gently, until the cross plate rests accurately upon the skin, and, above all, not to hurry the process of injection. In only two of my eight cases was even temporary amendment observed,—all died within fourteen hours. The quantity of fluid injected varied from two to five pounds. These results have been sufficiently discouraging, and have led me seriously to consider if a repetition of the practice is advisable. Cases of the most unpromising aspect do occasionally rally, and get well, after a collapse so profound as to leave no reasonable hope of recovery. I may instance a young woman named Hutcheson, whose case seemed quite desperate, and to admit of no rational remedy but injection of the veins. *No suitable vein could be found*, yet the patient is now quite convalescent. Are unexpected recoveries like this more frequent than cures effected by the saline injection of the veins in equally desperate circumstances? Till this question be resolved, I think we may still occasionally attempt a cure by the operation.—*Month. Journ.*, Dec. 1848.

90. *Directions Relative to the Prevention and Treatment of Cholera, by the Royal College of Physicians of London.*—The Royal College of Physicians of London, feeling that, on the re-appearance of epidemic cholera in England, the public may naturally look to them for advice and guidance, have deemed it proper to appoint a cholera committee, composed of physicians who hold important offices in the metropolitan hospitals, or who had extensive experience of the disease at its last visitation, to consider what measures it is expedient to adopt, with a view of preventing the spread of the disease, and of otherwise mitigating its evils.

The committee thus formed have, in compliance with the wish of the College, drawn up the following remarks and instructions, for the information of the public:—

1st. Cholera appears to have been very rarely communicated by personal intercourse; and all attempts to stay its progress by cordons or quarantine have failed. From these circumstances, the Committee, without expressing any positive opinion with respect to its contagious or non-contagious nature, agree in drawing this practical conclusion; that in a district where cholera prevails, no appreciable increase of danger is incurred by ministering to persons affected with it; and no safety afforded to the community by the isolation of the sick.

2d. The disease has almost invariably been most destructive in the dampest and filthiest parts of the towns it has visited. The Committee would therefore urge on the public authorities the propriety of taking immediate steps to improve the state of sewers and drains;—to cover those which are open:—and to remove all collections of decaying vegetable and animal matter from the vicinity of dwellings. They would also impress on individuals, especially of the poorer classes, the great importance of well-airing their rooms, and of cleanliness in both their dwellings and persons.

3d. A state of debility or exhaustion, however produced, increases the liability to cholera. The Committee, therefore recommend all persons, during its prevalence, to live in the manner they have hitherto found most conducive to their health; avoiding intemperance of all kinds, and especially the intemperate use of ardent spirits and other intoxicating liquors. A sufficiency of nourishing food; warm clothing, and speedy change of damp garments; regular and sufficient sleep; and avoidance of excessive fatigue, of long fasting, and of exposure to wet and cold, more particularly at night, are important means of promoting or maintaining good health, and thereby afford protection against the cholera.

The Committee do not recommend that the public should abstain from the moderate use of well-cooked green vegetables, and of ripe or preserved fruits. A certain proportion of these articles of diet is, with most persons, necessary for the maintenance of health; and there is reason to fear, that if they be generally abstained from, now that the potato-crop has in a great measure failed, many persons, especially amongst the poor in large towns, will fall into that ill condition, which in its highest degree is known as scurvy, and that they will in consequence be the readier victims of cholera. The Committee likewise think it not advisable to prohibit the use of pork or bacon; or of salted, dried, or smoked meat or fish; which have not been proved to exert any direct influence in causing this disease. Nothing promotes the spread of epidemic diseases so much as want of nourishment; and the poor will necessarily suffer this want, if they are led to abstain from those articles of food on which, from their comparative cheapness, they mainly depend for subsistence.

On the whole, the Committee advise persons living in districts in which cholera prevails, to adhere to that plan of diet which they have generally found to agree with them; avoiding merely such articles of food as experience may have taught them to be likely to disorder the stomach and bowels.

4th. The Committee are unable to recommend a uniform plan of treatment to be adopted by the public in all cases of looseness of the bowels, supposed to be premonitory of cholera. It is, doubtless, very important that such aliments should be promptly attended to; but since they may arise from various causes, of which a medical man can alone judge, the Committee deem it safer that persons affected with them should apply at once for medical assistance, than that they should indiscriminately use, of their own accord, or on the suggestion of unprofessional persons, powerful medicines, in large and frequently repeated doses. Should the looseness of the bowels be attended with feelings of great exhaustion and chilliness, the person should, of course, be placed in a warm bed, and the usual means of restoring warmth to the body be assiduously employed, until professional advice can be obtained.

5th. In order that the poor may have the means of obtaining such assistance promptly, the Committee recommend that the proper authorities should at once establish dispensaries in those parts of the town which are remote from the existing medical institutions; and that they should also take steps to provide distinct cholera hospitals, which it will require some time to organize, and which they believe will be found to be absolutely necessary, should the epidemic prevail in this metropolis with a severity at all approaching that which it manifested on its first appearance in England. The Committee wish it to be clearly understood, that they do not recommend the establishment of such cholera hospitals, on the ground of effecting the separation of the sick from the healthy, and of thus preventing the spread of the disease; but solely in order that, should the epidemic prove severe, proper attendance and prompt treatment may be ensured for the sufferers from cholera among the poorest and most destitute class. The existing hospitals, even if the authorities should consent to the admission of persons ill of cholera, could not furnish the requisite accommodation, unless they were shut against persons labouring under other severe diseases—a measure which, at the approach of winter especially, would add much to the distress of the poor.

6th. In conclusion, the Committee would urge on the rich, who have comparatively little to fear for themselves, the great duty of generously and actively ministering to the relief of the poor, while the epidemic prevails; bearing in mind that fuel, and warm clothing, and sufficient nourishment, are powerful safeguards against the disease.

They deem it most desirable that the parish authorities should at once improve the diet, and increase the comforts, of the poor under their charge; and that the wealthy should form societies for the supply of food, clothing, and fuel, to those who, though not paupers, still need charitable assistance in the present emergency.

Such measures, which it is the duty of those possessed of power and wealth to adopt, would, the Committee believe, if liberally carried out, deprive the cholera of half its victims.

John Ayrton Paris, President.
Francis Hawkins, Registrar.

College of Physicians, Oct. 28, 1848.

Prov. Med. and Surg. Journal, Nov. 15.

MEDICAL JURISPRUDENCE AND TOXICOLOGY.

91. *Researches on the Principal Metallic Poisons, and Mode of Ascertaining their Presence.* By M. Abrue. (Read to the French Academy, &c.)—It often happens that persons called upon to make toxicological examinations of substances entrusted to their care, regret the absence of a positive and unique method to serve as a guide when they are entirely without any indication as to the direction which should be given to their research.

Indeed, the treatises on toxicology which, in other respects, afford so much valuable information on the research after poisons, often leave the reader in a state of the most serious embarrassment, in proposing to him for each poison various processes, differing very much in value, and of a very dissimilar kind.

Hence arises a grave inconvenience. The investigator who wishes to ascertain with accuracy the presence of a poison in the suspected matter under investigation, finds it necessary to make so many experiments before he can in any way arrive at the probable nature of the poison for which he is searching.

This void we here endeavoured to fill as far as concerns the principal metallic poisons, and to bring the medico-chemical operations to the point of a single problem of analytical chemistry:—*One or more metals being given in the contents of an organic matter to determine their nature.*

To arrive at a solution of this important problem, we have passed successively in review the different well-known methods which up to the present time have been proposed for the special research of each metal.

Struck with the distinctness of the results obtained in the research after antimony, by the process of M. Millon, which consists, as is well known, in destroying the organic matter by the combined action of hydrochloric acid and chlorate of potash, we have conceived the idea of drawing up the basis of a general method, and have arrived at a modification of this process in such a manner, as not only to extend it to the research after all the principal poisons, but still more completely to disembarrass us of the organic matter.

This method comprehends the compounds of the following metals:—

Arsenic
Antimony
Mercury
Copper
Lead
Tin
Zinc
Silver.

The operation will be as follows:—

Analysis of the solid matters found in the stomach, the matters vomited, and of the